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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/010,440	11/08/2001	Kari Kirjavainen	U 011573-2	8064
140	7590	07/13/2005	EXAMINER	
LADAS & PARRY 26 WEST 61ST STREET NEW YORK, NY 10023			HOOK, JAMES F	
			ART UNIT	PAPER NUMBER
			3754	

DATE MAILED: 07/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 10/010,440	Applicant(s) KIRJAVAINEN ET AL.	
	Examiner James F. Hook	Art Unit 3754	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

The amendment filed August 27, 2004 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: "continuous electrode layers" is not set forth in the specification as originally filed and it's not clear from the drawings that such applies when the drawings do not show a finished pipe product, therefore, there is no support in the specification for this limitation.

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The subject matter added to the specification and claims, as set forth above, with regards to "continuous electrode layers" such is

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considered new matter when the originally filed specification including the drawings do not set forth support for the electrode layers being continuous.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Nishino (278).

The patent to Nishino discloses the recited hollow pipe comprising extruded layers including an inner layer 11 made of plastic adhesive, outside of which is an inner layer 12 made of a plastic that is electrically conductive and considered the equivalent of an electrode layer, outside of which is an insulating layer 13 of plastic adhesive separating the inner electrode layer and an outer electrode layer 14 which can also be made of electrically conductive plastic.

Claim Rejections - 35 USC § 103

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown in view of Schmidt. The patent to Brown discloses an inner layer 12 of plastic, a layer formed of wires 14 are electrically conductive and considered the equivalent of an electrode layer, and an outer layer formed of a plastic 16 with a metal reinforcing layer provided therein which inherently would act as an insulator between the wire layers, where breaking of the wires in layer 14 produces a signal or alarm, here the pipe is considered hollow. The patent to Brown discloses all of the recited structure with the exception of forming at least some of the layers by extrusion and using the second conductive layer 16 in combination with the inner layer to detect breakage. The patent to Schmidt discloses an alarm system comprising an inner layer 2 made of a material, paper, an electrode layer 3 in the form of aluminum foil, a plastic insulation layer 4, an outer aluminum foil layer 5 that can also be considered an electrode layer, where the two foil layers are connected together in such a way as to sound a signal when the sleeve is broken or tampered with, where at least one layer forming the sleeve is made by extrusion. It would have been obvious to one skilled in the art to modify the second metal wire layer in Brown to be an electrode type layer that in combination with the inner

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electrode layer would sound the alarm if the tube were damaged or tampered with which would provide for a more precise determination that the tube had been breached as suggested by Schmidt, and where it is obvious that plastic layers can be extruded and at least one layer of Brown could be extruded as suggested by Schmidt, as such would provide for a better pipe in that the layers could then cool while they are being attached together and eliminate production steps.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brown in view of Schmidt as applied to claims 1 and 2 above, and further in view of Charboneau. The patent to Brown as modified discloses all of the recited structure with the exception of utilizing the electrode layer to detect strain to sound an alarm. The patent to Charboneau discloses the recited pipe comprising an inner layer 32 of plastic, electrodes 16, 38,46 which can sound an alarm if they are broken or can also detect strain and sound an alarm. It would have been obvious to one skilled in the art to modify the pipe in Brown as modified to use the electrode layer to detect strain to sound the alarm as suggested by Charboneau as such would sound an alarm before the electrode layer is broken.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brown in view of Schmidt as applied to claims 1 and 2 above, and further in view of Swinbanks. The patent to Brown as modified discloses all of the recited structure with the exception of using the electrode layer to create sound in the tube to cancel noise in the pipe. The patent to Swinbanks discloses the recited cancellation of sound waves in a pipe by generating a wave to cancel the noise sound waves using electrodes 1, 2, 6. It would have been obvious to one skilled in the art to modify the pipe in Brown as modified by

providing structure to use the electrode layer to create a sound wave that will cancel out noise waves in the pipe as suggested by Swinbanks to make the pipe quieter.

Claims 5, 6, 9, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt in view of Thomas. The patent to Schmidt discloses all of the structure above with the exception of forming the insulating layer of a foamed material which inherently would have holes. It is believed the layers of Schmidt are considered hollow and provided with wires inside for its intended use, and therefore such is considered the hollow. The patent to Thomas discloses that it is old and well known to foam plastic materials in layers of a sleeve if certain properties are desired. It would have been obvious to one skilled in the art to modify the insulation layer in Schmidt to be made of any suitable plastic material including a foamed plastic as suggested by Thomas as such would provide the benefit of having some insulative properties for heat as well as for electricity.

Claims 11, 12, 15, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt in view of Thomas as applied to claims 5, 6, 9, and 10 above, and further in view of Noone (087). The patent to Schmidt discloses all of the recited structure with the exception of forming all the layers by coextrusion and including the conductive layers. The patent to Noone discloses that it is known in the art to form all the layers of a tube by coextrusion, and that the layers can include layers with conductive material and layers without. It would have been obvious to one skilled in the art to modify the conductive layers of Schmidt as modified to all be formed by coextrusion as such is an old and known method of forming tubes as suggested by

Noone where forming them by coextrusion would be cheaper and easier to perform without the need for a winding step.

Response to Arguments

Applicant's arguments filed January 10, 2005 and April 25, 2005 have been fully considered but they are not persuasive. With respect to the new matter rejection, Webster's 9th Collegiate Dictionary defines continuous as "uninterrupted" and applicants seam in the layer would be an interruption, therefore the only possible reading of the term having support in the specification is if one considers only the strip that makes up the layer to be continuous, but even such is not clear from the drawings therefore it is still considered new matter to the application. With respect to Nishino, where it is appreciated that some plastics may exist that are capable of being conductive without additives, the plastics used in Nishino, including polyolefins which would include polyethylene, are some of the materials used for the plastic layer 12 in Nishino, and such material is not that set forth by applicant as a known conductive plastic that is conductive without additives, therefore the plastics used in Nishino are still considered non conductive. If more proof of such is needed, see the patent to Schmidt column 2, lines 1-10 which set forth that layers of conductive foil can be separated by plastic such as polyethylene or similar plastic to reduce capacity effects between layers of foil which further supports the examiners statement that the layer in Nishino is inherently an insulation layer. With respect to the arguments directed at the Schmidt reference, applicant states that the reference does not teach a continuous layer in that there are gaps between the windings of foil, this is not persuasive when in column 1, lines 50-55

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of Schmidt it recites "the adjacent coils or convolutions could be spaced if desired, but preferably are either abutting or in contact at their edges or overlapping", this is the same structure as applicants, and as argued by applicant that such is considered continuous, then such meets the claim language even though the examiner is still of the opinion that a layer formed with a seam is not a continuous layer. So either applicant is correct in that such is not new matter and that the spiral wound strip with contacting edges is a continuous layer, or the reference to Schmidt discloses a continuous layer in that it's layer is formed of spiral wound foil strips that overlap. With respect to the fact that Schmidt is used to wrap around wires, it should be noted that Schmidt is merely being used as a modifying reference, and replacing one conductive layer with another conductive layer of equivalent structure is considered taught by the references. The reference to Schmidt need not teach any more than a tubular conductive layer for purposes of combination, it merely needs to supply the structure being substituted or a teaching of how the base reference can be modified, in this case the combination with Brown as a base reference. However, it is noted that the layer of Schmidt is considered hollow with the exception of containing wires which are not part of the tubular structure which forms the cover for the wires, therefore the wires 1 within the sleeve layer taught by Schmidt is merely the media which is used to convey what the sleeve formed by the plurality of outer layers are present to protect and monitor. The layers therefore are hollow and provided with wires therein to convey, much the same as applicants is intended for use to convey other materials and detect when such sleeve layer has been compromised via a detection means provided in the sleeve wall. It is immaterial how

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the wall is formed when there is no limitation that overcomes the structure of the sleeve layer of Schmidt, and article claims are being examined. There currently are no arguments directed toward why the reference to Schmidt cannot be modified, other than the teachings of Schmidt, however, the examiner has explained his viewpoint about the teachings of Schmidt. Thomas is merely used to teach the use of a foamed plastic instead of the plastic used in Schmidt. Claim 5 is not a proper Jepsom claim where there is no structure set forth as old and known in the art that the rest of the claim improves upon. Therefore it is not clear how such is a Jepsom claim meeting the requirements to be such, when there is no old structure set forth in the preamble. The sleeve of Schmidt forming the protection and detection to a media such as conductive wires does not suggest that such is not in fact hollow and provided with wires therein. Applicants apparatus would be useless if it did not convey something within it when such is provided with a sleeve layer that is provided to detect failure and leakage, therefore applicant's hollow pipe is a sleeve provided with something inside that is to be conveyed and thereby providing the need for detection of leakage, the same is true of Schmidt however it conveys a different type of material via wires. The sleeve member of Schmidt that covers the wires 1 and has a structure which provides the required structural elements with the exception of foaming a layer which the modifying reference teaches is possible of the types of plastics used in the layer of Schmidt to be foamed, thereby teaching the equivalence of foaming layers and not foaming layers made of the same material as Schmidt's layer. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it

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must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). It is considered that one skilled in the art with the teachings of Thomas would clearly understand that plastic layers can be foamed to provide additional properties to the material, some of which would be heat and impact resistance, and providing the layer of Schmidt with a foamed layer would further aid in protecting the conveyed wire layer 1 from damage from heat and impact. It is noted that the motivation to combine the references need not be the same as applicants reason to combine, therefore applicant does not need to claim foaming the layer for heat resistive properties for such to be motivation to combine the references. At this time the examiner feels that the record is clear and explained in a different manner why the reference to Schmidt is considered to be disclosing the claimed structure and an interview would not be required, however, should an interview still be deemed necessary the examiner will grant an interview upon a telephonic request to do so. It should be noted that there are claims with limitations that other than the new matter rejection of claims appear to read over the prior art of record, but until the issue of new matter has been overcome such will not be listed as objected to in that they are under a rejection just not under prior art. Upon a telephonic request for an interview the examiner will grant an interview at a convenient time for both parties and the examiner

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will attempt to help in any way to reach a positive conclusion if an interview is still deemed necessary by applicant, at this time however, the formal request is improper in that it recites the clarification of Schmidt with respect to claims 1 and 2, where Schmidt is merely used in claims 1 and 2 to modify a hollow tube provided with electrode layer with a different form of electrode layer, therefore Schmidt is not being used in any other manner except to modify the layers in Brown which are hollow with layers that also are of the same tubular form as taught by Schmidt, the hollow limitation does not come in to play in these claims with respect to Schmidt when such is not used to teach modification of a the tube being hollow, but merely how to form the electrode layers. The examiner included a more detailed description above as to how this reference is being used as a base reference with respect to claim 5.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The patents to Mathieu, Hillburn, and De Meyer disclosing state of the art multilayer conductive hoses.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

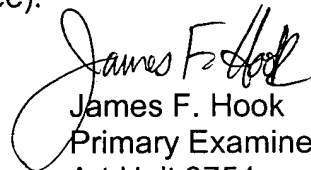
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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James F. Hook whose telephone number is (571) 272-4903. The examiner can normally be reached on Monday to Wednesday, work at home Thursdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Mar can be reached on (571) 272-4906. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


James F. Hook
Primary Examiner
Art Unit 3754

JFH